Voorbeeld documentatie

Onderstaand een voorbeeld van een acceptatie- en testdocument zoals wij deze opleveren na inbedrijfstelling. Dit document toont hoe prestaties, veiligheid en functionaliteit worden gecontroleerd en vastgelegd.

2.1 AHW Load Measuring Pins (LMP) Calibration

Purpose of Test:	• Verification of LMP calibration, so that the load readout available to SCADA is correct.
Pre-Requisites:	• Anchor and rigging including load cell for 200mt anchor (bollard) pull. ***NOTE:*** *Testing is limited by the vessel's bollard pull capacity.* • Anchor lowered to the seabed. • Jaw clutch configured (Drive system 1 & 2 engaged). • Winch is operational.

№	Description		Load Link	SCADA Read out	%	OK/NOK
Band Brake Applied ☐						
1.	• Linepull matching the next column should be generated by the vessel. • Joystick should not be giving any setpoint (neutral) • Band brake should not be applied • Record results.	0% BP	**0 mt**	**0 mt**	< 5 mt	**OK**
2.		20% BP	**63.6 mt**	**62.5 mt**	+/- 10 %	**OK**
3.		40% BP	**71.9 mt**	**71.0 mt**	+/- 10 %	**OK**
4.		60% BP	**103.5 mt**	**99.88 mt**	+/- 10 %	**OK**
5.		80% BP	**167.7 mt**	**162.87 mt**	+/- 10 %	**OK**

Note: Due to the waves and the movement of the vessel, the load in the wire can vary. The high peaks are stored as a trapped torque in the BB load cell, changing the read-out. This effect is less in the higher loads.

№	Description		Load Link	SCADA Read out	%	OK/NOK
Band Brake -not applied ☐						
1.	• Linepull matching the next column should be generated by the vessel. • Joystick should not be giving any setpoint (neutral) • Band brake should not be applied • Record results.	0% BP	**0 mt**	**0 mt**	< 5 mt	**OK**
2.		20% BP	**48.30 mt**	**44.97 mt**	+/- 10 %	**OK**
3.		40% BP	**78.4 mt**	**77.4 mt**	+/- 10 %	**OK**
4.		60% BP	**136.1 mt**	**126.4 mt**	+/- 10 %	**OK**
5.		80% BP	**169.3 mt**	**162.5 mt**	+/- 10 %	**OK**

Note:

During the Commissioning, the Gain and Offset of both LMP's are calibrated with a test tool that was mounted on the frame of the winch. During this commissioning test we have checked the full range from 0 till 400 mt, to determine the best gain and offset.

During sea-trial we are only able to verify the range from 0 till 200 mt with an external Load-Link, since we are limited by the max bollard pull of the vessel, which is around 200 mt.

Signatures

Oceana Estaleiro S.A.	CBO	DNV	Huisman

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2.2 AHW Performance & Functional testing under load

CAUTION: ***The load link should be removed from rigging; it is not required for the test. If not removed, the load link and the Wire may damage.***

NOTE: *All values indicated are approximate.*
NOTE: *Line speeds mentioned in the table below are based on wire diameter of 89mm.*

Purpose of Test:	• Verification of system response under actual load. • Functional test of wire spooling (spooling system) • Verification of line and drum speed performance under actual load.
Pre-Requisites:	• Anchor and rigging for 200mt anchor (bollard) pull. ***NOTE:*** *Testing is limited by the vessel's bollard pull capacity.* • Anchor lowered to the seabed. • Jaw clutch configured (Drive system 1 & 2 engaged). • Winch is operational.

№	Description	Result +/- 10%	OK/NOK
Line Pull of approx.150mt at 1st Layer			
1.	Line pull of approx.150mt at 1st layer on drum should be generated by the vessel.	Linepull (SCADA) = **150 mt** Layer = **1**	**OK**
2.	Start hauling in on drum at nominal speed, while making sure that the line pull of approx.150mt is maintained.	Linepull (SCADA) = **147 mt**	**OK**
3.	Keep hauling in for max 15 minutes and verify speeds mentioned in next two rows.		**OK**
4.	**Nominal speed hauling in:** • Verify Wire speed = 8.3 m/min • Verify Drum speed =1.66 rpm	Wire Speed = **8.0 m/min** Drum Speed = **1.6 rpm**	**OK**
5.	**High speed hauling in:** • Verify Wire speed = 15.5 m/min • Verify Drum speed =3.11 rpm	Wire Speed = **15.6 m/min** Drum Speed = **3.1 rpm**	**OK**
6.	Verify smooth spooling behaviour of spooling device during operation.		**OK**
Line Pull of 80mt at other layers			
7.	Linepull of approx.80mt at 2nd layer on drum should be generated by the vessel.	Linepull (SCADA) = **80 mt** Layer = **2**	**OK**
8.	Start hauling in on drum at nominal speed, while making sure that the line pull of approx.80mt is maintained.	Linepull (SCADA) = **80 mt**	**OK**

9.	Verify nominal and high Wire speed per layer	**Layer**	**Nominal Wire Speed [m/min]**	**High Wire Speed [m/min]**	**Nominal Wire Speed [m/min]**	**High Wire Speed [m/min]**	
		2	9.1	17.0	**8.7 m/min**	**17.2 m/min**	**OK**
10.		3	9.9	18.5	**9.7 m/min**	**18.3 m/min**	**OK**
11.		4	10.7	19.9	**10.5 m/min**	**19.8 m/min**	**OK**
12.	Verify smooth spooling behaviour of spooling device during operation.						**OK**

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